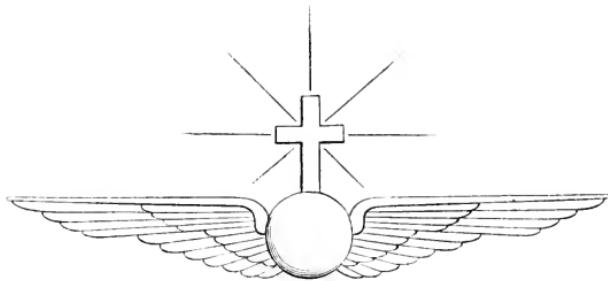




PHILOSOPHIA

ULTIMA.



CHARLES WOODRUFF SHIELDS.



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"BUT as these great things are not at our disposal, we here, at the entrance of our work, with the utmost fervency and humility, put forth our prayers to God, that remembering the miseries of mankind and the pilgrimage of this life, where we pass but few days and sorrowful, he would vouchsafe through our hands, and the hands of others, to whom he has given the like mind, to relieve the human race by a new act of his bounty. We likewise beseech him, that what is human may not clash with what is divine; and that when the ways of the senses are opened, and a greater natural light set up in the mind, nothing of incredulity and blindness towards divine mysteries may arise; but rather that the understanding, now cleared up, and purged of all vanity and superstition, may remain entirely subject to the divine oracles, and yield to faith the things that are faith's: and lastly, that expelling the poisonous knowledge infused by the serpent, which puffs up and swells the human mind, we may neither be wise above measure nor go beyond the bounds of sobriety, but pursue the truth in charity."

INSTAURATIO MAGNA.

PHILOSOPHIA *ULTIMA*
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- I. **Scientia Scientiarum.**
- II. **Ars Scientiarum.**
- III. **Scientia Artium.**

Philosophia Ultima.

near the River

“In Theology,” said Kepler, “we balance authorities; in Philosophy we weigh reasons. A holy man was Lactantius, who denied that the earth was round; a holy man was Augustine, who granted the rotundity but denied the antipodes; a holy thing to me is the Inquisition, which allows the smallness of the earth, but denies its motion; but more holy to me is truth; and hence I prove by philosophy that the earth is round and inhabited on every side, of small size, and in motion among the stars,—and this I do with no disrespect to the Doctors.”

If theologians, as well as philosophers, may now enjoy the quaint irony and earnestness of these words, it is because even a defeated party can afford to smile at absurdities which they have outgrown. We sometimes amuse ourselves with the errors of a former age by turning them into a foil to modern wisdom. But they may serve a graver purpose. History, while it cheers us with evidences of prog-

ress, likewise warns us that we are still fallible, and possibly as to this very class of questions more than any other.

How far the nineteenth century is really in advance of the seventeenth, as respects the great problem of a logical affiliation of human science and divine revelation, and consequent harmony of civilization and Christianity, may be seriously argued. Since the age of Kepler there have indeed been changes for the better. Astronomy no longer disturbs the current interpretation of scripture; theology has grown more tolerant of scientific opinion; and the memorable lessons of the controversy are not yet spent in other fields of inquiry. But what progress has been made toward a settlement of the general question involved in such conflicts? How much nearer are we to a philosophy or fixed doctrine of the reciprocal relations of reason and revelation, of science and theology? What broad surveys have we of their distinct provinces and common ground? What clear discriminations of their respective methods and laws, and of their logical and historical interaction? And what systematic attempts at harmonizing and organizing the existing bodies of knowledge which they have developed? Must not every enlightened observer admit that the field of controversy has been widening rather than contracting; that the state of parties throughout that field grows more involved and serious; and that the tenor of the

strife is already critical? And is it to be maintained, that this is the normal or final relationship of the two interests? Are they of necessity and always mutually indifferent, antagonistic, and exterminating? Or, do they admit of gradual reunion, coincidence, and harmony?

These are questions which begin to force themselves upon thoughtful minds. They not only invite, but require and deserve consideration. Their very difficulty and delicacy are overborne by their urgency.

Viewed in one light, they are indeed suited to daunt the most reckless speculation. What mortal wisdom can reap two such vast fields of knowledge, or bind into sheaves such varied harvests of truth! How jealous is reason of faith, and faith of reason! And how warily must either venture within the bounds of the other! To link the jarring sciences, material and moral, rational and revealed, into one series, by one method, and to one aim; to organize a true hierarchy in this present anarchy of knowledge, divine and human,—this is not the task of any single mind or age; and were it in itself a mere wordy pastime of philosophers, all earnest souls would but shrink from it in proportion as they comprehend it.

Viewed in another light, however, such questions only nerve while they tempt our curiosity. What a mass of human interests hangs upon their issue! What a medley of human opinions is involved in

their solution! How all human duty and destiny concentrate in the problem of reconciling the finite with the Infinite reason! and how all human history points to the goal where science returns into Omnisience, the earth becomes subject to man, and man to God! The unity of nature and scripture, the harmony of theory and creed, the marriage of reason and faith, the perfection of knowledge, the triumph of art, the regeneration of society,—these, in their order, are linked ideals of prophecy and philosophy, which at once overawe and charm us into an enthusiasm that must grow in fervor as it grows in humility and caution.

History is full of analogies to support the idea that great social movements do not burst upon the world as mere happy accidents, or as the achievements of distinguished leaders, but grow logically out of some existing exigency, known and felt by the few long before it is seen by the many. The modern reformations in religion, science, and politics which we associate with such names as Luther, Bacon, and Washington, and hail as the wonders of our era, may now be traced back to causes secretly working for centuries before, and be linked in a series of events binding the whole past to the present, and the present to the future. For thus does Providence rule the world in order and reason.

An inquiry into the historical origin of the existing schism between science and revelation, might confirm

this principle. Having begun in a legitimate revolt of reason from authority, that schism has grown up into one of the great diseases or abuses of Protestantism, calling for another reformation, to be as far in advance, it may be, of the incidental evils of Protestantism, as Protestantism itself is in advance of the evils of Catholicism; a reformation which may cure the sectarianism and infidelity of the age, not by a recoil to the dead catholicity of the past, but by the growth of that new catholicity of the future, which shall rest upon the demonstrated harmony of all truth, and subsist in a spontaneous and universal concurrence; and a reformation, too, which shall be none the less real and thorough because gradual and peaceful in its progress. No more instructive chapter in the history of philosophy could be written, than that which should review the collisions of the theological and scientific classes during the past three centuries, and trace the rise of that anarchy of the sciences and consequent anarchy of opinions, institutions, and interests which has become the characteristic peril of modern civilization.

The object of this essay, however, is simply a survey of the present state of opinion upon the question, with the view of showing that the opposition, so long existing between these two modes of knowledge, has reached a critical stage, or amounts to a grave exigency; and that philosophic and educational reforms are already imminent and practicable.

“It is a pleasure,” says a master of ancient, as quoted by the master of modern philosophy, “to stand on the shore and to see ships tossed upon the sea; a pleasure to stand in the window of a castle and to see a battle, and the adventures thereof below; but no pleasure is comparable to the standing on the vantage-ground of truth, (a hill not to be commanded, and where the air is always clear and serene,) and to see the errors, and wanderings, and mists, and tempests in the vale below; so always, that this prospect be with pity and not with swelling or pride.” But, when the survey is to be for use rather than pleasure, even the bird’s-eye view of a battle-field, bounded only by the horizon of thought, covered all over with the smoke of controversy, and whereon not kings or peoples alone, but great ideas are striving for the mastery, with lasting interests of humanity staked upon the issue,—how it behooves us to lay aside all prejudice as well as pride, and, like Moses at Ajalon, pray only that the sun may not go down upon the world till Truth shall come off victor.

Though there may be nothing like extended organization, or avowed concert underneath the vast medley of modern philosophical opinion, yet throughout the educated mind of the age, that mind which garners the past and forecasts the future, there has been a steady, silent growth of feelings and beliefs, which, at least, admit of being described, compared, and estimated. We see them reflected and contrasted in the

periodical literature of the day so clearly, that the whole community of the learned, as they stand affected to the question, may be divided into classes or parties, none the less real because never visibly arrayed or organized.

If, in here grouping and showing them together in a body, we do not cite well-known writers and systems, let this be because it would be as needless as difficult in a plan designed to reflect not merely all actual, but all possible shades of opinion; and because, too, it may be well that we should not bewilder the view with any mere personalities, but remember only, as we gaze into the vast spectrum of human conceit and error, that it is the one ray of truth there thrown into such brilliant distortion, and that not less our own little foible than another's, must first be purged to form the perfect prism of knowledge.

Of the classes to be reviewed, the two largest and most marked, are those who are averse and those who are inapt to this great work of harmonizing the knowledge of man with the knowledge of God.

If we except the few minds inclined by peculiar taste to the inquiry, it would doubtless be found that large bodies of scholars and thinkers are more or less averse to its prosecution. Through some educational or professional bias, or without any reflection, they acquiesce in the present anomalous relations of reason and revelation as necessary, unimportant, or even desirable. They may be graded, according to their

degrees of aversion, into extremists and indifferentists, and paired in each class, according to their point of departure, into theologians and philosophers.

To the extremists belong those theologians and philosophers who depart into the extremes of dogmatism and rationalism, or who respectively dogmatize within the province of reason, or rationalize within the province of revelation. They are the poles apart upon every question into which scripture and science can enter. They insist each against the other upon exclusive jurisdiction throughout the entire domain of truth; or, if they admit common ground, it is viewed as a battle-field, in which there can be neither peace nor truce, but only deadly warfare, till one or the other is exterminated.

The theologian of this class would invade the whole province of reason. The scriptures he takes as a revelation, not merely in respect to strictly theological questions, but also in respect to such purely scientific questions as the construction of the material universe, the formation and antiquity of the earth, and the physical and psychical organization of human nature. Their allusions, in popular language, to such subjects, are wrought by him into a kind of scientific creed, which he is ready to maintain in defiance of all opposing theories, and to bind upon the conscience as pure dogma or mystery of faith; and even when his exegesis comes in collision with actual discoveries of fact, rather than change it, he will suppose a

miracle where one would have been as useless as improbable. Theology is for him a stern mistress, rather than the adored queen of the sciences, and holds them in abject pupilage at her feet.

Examples of this kind of ultraist have never been wanting. He has appeared at the dawn of every science, ready to decide its questions by the weight of ecclesiastical or scriptural authority, and to oppose its discoveries by some physical or metaphysical doctrine drawn from the Bible. When the heliocentric theory was first broached, he thought it not only in conflict with the letter of inspiration, but with a different astronomy which he found in scripture, and which permitted him to admire the wisdom and goodness of Jehovah in immovably fixing the earth's plane and cope, and causing the heavenly luminaries to rise and set over the scene of human happiness. In our day, he is dogmatizing in a similar manner within the province of geology. The whole problem of ethnology he has settled in advance. And in psychology, sociology, and theology, he does not even admit any action of reason, but denounces it as the foe or rival of revelation.

At the opposite extreme is the philosopher of the same class. He would invade the whole province of revelation. The natural reason he deems competent to deal not only with philosophical problems, but even with the high theological problems of creation, incarnation, and judgment, of duty, destiny, and eternity.

By means of its crude surmises he frames a kind of theological theory which he weighs against all inspired teaching, and claims to support with a purely rational demonstration; and when any of his researches or speculations appear inconsistent with received interpretation of scripture, he is in haste not merely to unsettle that interpretation, but to impugn the very fact of inspiration, together with the entire doctrinal system it upholds. Science becomes in his hands a crazed parricide, rather than the sane daughter of theology, and with every new discovery aims a deadly blow at the very breasts which nurtured her.

If it be maintained that the former species of ultraist is on the decline, it must be granted that this latter is on the increase. He has been emboldened by the marvels of modern research and the tolerance of the age to advance from the portal to the very shrine of revealed truth. One doctrine after another he is assailing with scientific theories, and undermining by speculative processes. The christology of scripture he thinks to have made obsolete by the discovery, that our earth, once supposed to be the scene of a divine incarnation and center of the universe, is but an insignificant planet lost among myriads of suns. Against its cosmogony, he arrays the nebular hypothesis and the geologic ages. He menaces its anthropology with the theory of indigenous races. And as to its soteriology, ecclesiology, and

eschatology, he does not even admit the fact or need of revelation, but dreams of another gospel, church, and millennium, which are to be the pure product of reason.

Thus the extremists, on both sides, reach a like degree of divergence and opposition, and in their aims or tendencies are alike destructive. Were either to prevail against the other, an original power of human nature would be annulled, and a vast accumulation of human knowledge dispersed. The real issue made by them, however unwittingly, is whether philosophy shall extirpate theology, or theology shall extirpate philosophy; or, stated more practically, whether civilization shall reduce Christianity to superstition, or Christianity reduce civilization to barbarism.

Now, the prime error of such ultraism is plainly a false view of the normal relations of reason and revelation. There is nothing in the idea of either to necessitate collision or conflict. Viewed in the abstract, the finite and the infinite mind, the divine and the human intelligence, cannot be presumed to be in a state of logical opposition. Each may have its own distinct sphere, method, and aim; and, at the same time, safely concede the like to the other. To put them at war, would be only to force them into abnormal action. It may be taken as an axiom, that it is at once contrary to reason to oppose revelation, and contrary to revelation to oppose reason. So that, where any antagonism springs up between them, it

must be treated as simply anomalous, and such abatements made as follows:—

1. It is apparent rather than real. Often it consists of mere logomachy, which would disappear on a close comparison of terms and views. Theological creeds and scientific theories come into conflict, not because of any actual disagreement between the facts of nature and the truths of scripture, but solely because of some false exegesis on the one side, or some false induction on the other. All truth must be found consistent with itself, when freed from admixture with error.

2. It is temporary rather than permanent. The least developed sciences are those which are in this stage of antagonism, while the most exact and complete are already passing into one of lasting harmony. As our philosophy and our theology mature, they will correct and complement each other, until at length they shall stand forth coincident. The unity of knowledge is as axiomatic as the unity of truth.

3. It is, in some of its effects, salutary rather than hurtful. By means of it, the several growths of reason and revelation in history have been disentangled, and left to a freer and more fruitful development. The former have been emancipated from ecclesiastical domination and fanatical interference, and the latter from unsafe alliances with bigotry and superstition; while in both departments new enthusiasms have been kindled and a minuter divi-

sion of labors promoted. The fiercest controversy has only disciplined them, and, in the end, found them to be but friends who had mistaken each other for foes.

By such proofs as these, it may be shown that the two kinds of cognition, whatever else they may be, are not hostile and exterminant, but distinct and separate, limiting each other with boundaries which neither can pass except at its own peril. Let the philosopher, then, who would invade theology be warned by that heathen fable wherein "men and gods are represented as unable to draw Jupiter to earth, but Jupiter able to draw them up to heaven;" and let the theologian who would invade philosophy, be warned by that saying of a Christian sage, "If you will try to chop iron, the ax becomes unable to cut even wood."

In contrast with this class, and perhaps occasioned by it, is another which we have termed the indifferents. These are the theologians and philosophers who insist upon a strict indifference between reason and revelation, or who would respectively have reason to rationalize without revelation, and revelation to dogmatize without reason. They stand aloof from every question into which scripture and science can enter. In mutual dread of invasion, they seem to have agreed upon a division and joint occupancy of the domain of truth, while as to any common ground between them, they will keep up a kind of

armed neutrality or truce until either shall have demonstrated his power to take and hold it in defiance of the other.

The theologian of this class does not invade, but simply ignores the province of reason. In his view, the facts of nature have nothing to do with the truths of scripture, and are to be treated as absolutely irrelevant. When any scientific theory assails his exegesis, he is at no pains to inquire into the relative truth or value of either; and when any scientific discovery sheds new illustration upon a revealed doctrine, he shuns it as a questionable admixture of the sacred with the secular or profane. He clings to the interpretations of a former and darker age, and, in the face of all the light of modern research, refuses either to correct or improve them. Theology, the true mother of the sciences, is turned by him into a monster who spurns them even when they come with joined hands to kneel at her feet.

This species of neutral is a creature of modern controversy. Alarmed at the disastrous inroads of skepticism, he is fain to think there can be no peace or safety but in indifference, and will therefore allow, within the limits of orthodoxy, the most opposite opinions upon scientific questions. In astronomy, he will not inquire whether other worlds also illustrate the God of scripture, or are but a mere meaningless waste of matter. In geology, he will not decide

whether the earth has passed through long eras of creation, or was literally stratified, with all its fossils, in the space of a week. In ethnology, he is loth to face the problem, whether the unity of the race is one of origin or of nature. In psychology, he is now a materialist and then a spiritualist. In sociology, he is by turns absolutist or reformer. In theology, he is unconsciously half deist or half pantheist. Certain only of his revealed creed, he is dubious of all rational researches.

As his counterpart, we have the philosopher of the same class. He would not invade, but only ignore the province of revelation. Its mysteries are in his eyes too transcendental and vague to be included in exact scientific inquiries. Should his theories run counter to any reigning doctrine or interpretation of scripture, he is in nowise troubled at the discrepancy, or should they seem to require any of its ideas or records for their own rational support, he almost scorns them as unscientific and prejudicial. Even his vocabulary has become more pagan than Christian. His God is but the abstraction of a "Great First Cause" or a personification called "Nature," and all divine works and purposes are to him but "phenomena," with their "causes" and "laws." The very notion of a Creator he has banished from the creation, and thus rendered any unity of knowledge or of research impossible. The sciences, torn by him from that theology which nurtured them, have gone

forth, a wrangling sisterhood, to wander, estranged, and disbanded.

As the former kind of neutral sprang from the reaction against infidelity, so this latter sprang from the reaction against sectarianism. Perplexed at the medley of creeds and churches, he despairs of any certainty, and though the strictest precisian in science, will be content to become the veriest latitudinarian upon all theological questions. In bibliology, he is at a loss whether to treat the Bible as the one catholic revelation or as a kind of Hebrew classic. In christology, he cannot decide whether to regard Jesus as the second person in a divine trinity or as a Nazarene peasant. In anthropology, he is not certain whether mankind are in a state of sin and misery or in a stage of imperfect development. In soterology, he knows not whether the Saviour of the world was the Lamb of God or the most heroic of martyrs. In ecclesiology, he doubts whether the church is a visible organization or an invisible communion of saints. In eschatology, he queries whether the resurrection, judgment, heaven and hell, are solemn realities or oriental metaphors. Sure only of his scientific discoveries, he looks with distrust upon all religious inquiries.

Thus the indifferentists on both sides remain fixed in like seclusion, and in their tendency are alike distracting. So long as the two thus avoid each other, a kind of intellectual duplicity must needs be fostered,

and rival arbiters of truth set up for the decision of the most momentous questions. The experiment they are making, though unconsciously, is that of holding one thing in theology and another thing in philosophy, or of rendering philosophy irreligious, and theology irrational, while practically it tends to an utter divorce of Christianity and civilization, with an extravagant development of each, which would only make their collision the more fearful and disastrous, whenever, in any great social crisis, they should rebound from the forced separation.

Now, as we found it with extremism, so is it with this indifferentism: the two parties proceed upon a false view of their normal relations. Though they are not antagonistic, yet neither are they indifferent. Though they need not oppose, still less need they avoid each other. However distinct may be their spheres, there is, notwithstanding, intersection and common ground. However diverse may be their methods and aims, there must be interaction and harmony. They in fact presuppose each other, and, unless mutually complemented, would be alike powerless and dead. Reason admits and craves revelation; revelation requires and stimulates reason. Whenever then any separation arises between them, like that which now exists as a reaction from their unnatural conflict, this too is to be treated as anomalous, and in various ways may be proven too serious to be overlooked or palliated.

1. It is of the nature of a schism in the body of truth. Even when it involves no strife of words or of opinions, no collision between creeds and theories, yet, behind the show of peace and concord, it leaves the natural sundered from the supernatural, the discovered from the revealed, the human from the divine intelligence. As the connection between nature and scripture insures the connection between philosophy and theology, any forced severance of them tears truth from truth which God hath joined together.

2. It is of an extent involving the whole mass of knowledge. Instead of being partial or occasional, it has become progressive and general. It may be described as a vast schism which had its historical origin in the Reformation and has since grown and spread through all the sciences with a tide of increasing disruption and anarchy. The time is passed when theology could be called their nurse and mistress. One after another they have been breaking away from their ancient pupilage and running into seclusion and estrangement, until at last the very idea of a God, that only bond which can hold them together, even as it alone can give unity to the totality of phenomena upon which they proceed, has been formally ignored, and it has become the opened secret of the age that infidelity, once metaphysical, is now scientific, and science, once theological, is now all but atheistic.

If we seek the traces of this great rupture, we find

them conspicuous, not merely in breaches or separations, but also in actual controversies, waged at every point of contact along the entire range of secular and sacred learning. As we have seen, there is no rational science in which are not to be found discovered facts left detached from some needed portion of revealed truth, and no revealed science in which are not to be found fundamental doctrines directly menaced by some scientific theory; while, in the summary department of philosophy itself, we have the two opposing lines marshalled, as if for a last decisive encounter, by systems which array the embodied results of human research against divine revelation upon the avowed principle that science, by the law of its growth, can only subsist upon the extinction of theology and is destined at once to destroy and supersede it.

Thus that body of knowledge commonly regarded as most exact and certain is fast detaching itself, in jarring fragments, from that body of knowledge commonly regarded as most sacred and beneficent. And a feeling of the rupture may be said to pervade the whole community of scholars, ranging between the extremes of confident skepticism on the one side and vague misgiving on the other, with an unsatisfactory suspension of judgment among conservatives; while among the masses, following the course of all great intellectual movements, it is already diffusing popular influences which may survive long after it

shall have received sentence at the tribunal of philosophy.

3. It is, in its issue, fraught with the direst evils. No mere war of abstractions or strife of logic, it is already unfolding its disastrous effects in every sphere of human interest.

As the first class of such evils may be cited that very anarchy of the sciences which has been described. Only the charlatan of the one party or the bigot of the other could be blind to the wild confusion and strife which now reign throughout the intellectual domain. The genuine lover of truth for its own sake, on whichever side he may be ranged, instinctively recoils from this widening breach between our knowledge of the works and of the word of God, and craves all possible reconciliation, if only as an intellectual necessity and a rational ideal. That human science must yet reflect divine omniscience, or that divine revelation must yet be supported by a human demonstration, is at once a yearning and a presentiment of the philosophic mind. Next in strength and nobleness to the instinct which longs to have all truth is that which longs to have all truth consistent with itself.

As a second class of evils, and consequent upon the former, may be named that derangement of the educational system, secularization of learning and sectarianism of the professions, in which the great schism has practically expressed itself. The mere

pedants of either side, the divines and savans, sun-dered by professional antipathies that render them almost incapable of appreciating each other's peculiar enthusiasm, will indeed be content with routine labors and special researches and seek no intellectual commerce beyond their own province; but original seekers for truth and actual contributors to the world's stock of knowledge in all the walks of learning soon find themselves meeting together on the high ground of first principles, and in proportion as they there realize a community of opinions and aims will they escape hurtful collision and further each his own beneficent mission. In seeking thus to found the catholicity of learning upon the unity of science, philosophy puts on the garb of philanthropy and the lover of truth becomes also the lover of his kind.

As a third and still more obvious class of evils may be mentioned that skepticism in religion, radicalism in polities, and sensualism in art, (both industrial and æsthetic,) which are the final results of such schismatic knowledge and culture. A few extremists may affect to regard this sore conflict between reason and authority, order and progress, material and spiritual culture, as normal, necessary, or incurable; but there are, this hour, in all lands and classes, enthusiastic believers in social regeneration as at once within the vision of prophecy and the scope of history. And it is by the disappearance of

the sectarianism of science alone that they may hope for the disappearance of the sectarianism of learning, religion, and polities. For, since the ideas of philosophers at length become the opinions of the people, a logical compact of truth and knowledge among thinkers and scholars must, sooner or later, be followed by a practical compact of institutions and interests among the masses. In thus striving after the perfection of science, philosophy comes to the aid of humanity in its effort after the perfection of society.

It is indeed true, as has already been hinted, that each of these great evils may have some incidental and compensating good. This dissection of the sciences, in so far as it is merely artificial and logical, may be as convenient as it is unavoidable; this professional zeal and academic prejudice, by dividing the task of philosophy, may promote research and erudition; and even these social conflicts of diverse creeds, theories, and systems, by carrying the great battle of civilization from the region of abstraction into that of reality, may only the more conspicuously relieve truth and virtue against error and vice. But when we have duly acknowledged such mercies of our transitional state, there still remain the duty and the testimony of further progress and higher improvement. Even while we hail these straggling gleams of light, we only see the darkness more plainly and long for the day-spring.

In this manner it is to be shown that the two

kinds of science, the rational and the revealed, though they may not be in a state of deadly warfare, are nevertheless in a state of direful schism, for the healing of which both parties should yearn and labor. When either the philosopher would dream of dispensing with theology or the theologian of dispensing with philosophy, let both remember the vital bonds which join them in a blessed marriage, and dread any coldness between them, as alike with any conflict fatal to the cause of truth and humanity.

We next pass, in our hurried review, from those who are averse to those who are inapt to the great reconciliation. There is a large body of scholars, who, while rightly inclined, are still unfit for the work. Though impressed with its necessity and vastness, yet from some defect of mere intellectual temperament or training, they either fail in the effort or relinquish it as hopeless. We divide them into impatient and despondents.

As impatient may be classed those theologians and philosophers who are in haste to combine their several fruits of research, but overlook, the one the claims of reason, and the other the claims of revelation. No border question can arise which they will not at once force to a settlement. Already sure of the ideal unity of truth, they would also make sure of the ultimate system of knowledge and range over each other's domain in search of materials for its construction; while, in the sphere of practice, they will

straightway organize upon its basis the ultimate system of society.

The theologian of this mood is in haste to appropriate the whole existing product of reason. Throughout the rational division of each science he strays, sifting theories and culling facts to be wrought into his exegesis. Astronomy is made to localize his heaven and hell and yield the scenic material of his judgment. Geology simply enacts his dramatic week of the creation. Anthropology merely upholds his Adamite covenant. Psychology shows him the play of his doctrines. Sociology gives him the scaffolding and waste material of his church polity. And even rational theology is taught to pronounce his formulas of the trinity and the incarnation. Science is degraded by him from a handmaid to a mere slave of theology and put to the drudgery of propagandism.

This kind of impatient is an offspring of modern dogmatism in forced alliance with rationalism. His creed, involving thus a mere crude mass of extraneous knowledge, is cherished by him as the sum of truth; and not content with it as mere dogma, he will sometimes be found pressing it through all practical spheres as the only cure of the existing social anarchy. He becomes the zealot, who would heal the divisions of philosophy at the fount of ecclesiastical infallibility, or hush the dissensions of polities with peace-societies and world's congresses, or resolve the sects of religion

by himself adding another to the medley, or by gravely inviting the rest of Christendom to flock into his church and proceed to organize the millennium upon his platform. A seducing prophet only, he builds the walls of Zion with untempered mortar, and, amid the clash of opinions and the shock of arms, still cries peace, when there is no peace.

But not less marked is his mate, the philosopher of the same temper. He would appropriate the whole existing product of revelation. From the revealed portion of each science he draws doctrines and texts for the support of his theories. His latest astronomical speculations he finds hinted at in the Book of Job and the Psalms. His geological epochs he unfolds with scientific precision from the first chapter of Genesis. His studies in ethnology he splices with the Mosaic record and doctrine of races. His psychology he is pleased to have foreshadowed by the metaphysical writings of the New Testament. His sociology can take many hints from the prophetical scriptures. And even his absolute religion he admits to be only the full outgrowth of Judaism and Christianity. Theology is degraded by him from a queen to a mere vassal of science, and chained to the chariot of progress.

This kind of impatient differs from the other in being an offspring of modern rationalism in forced alliance with dogmatism. His hasty digest of truth he exalts as the ideal of all philosophic yearning,

and, lest it be thought a mere dream of the cloister, he will sometimes, guised as a harbinger of social regeneration, emerge with it into actual life and be heard piping its pastorals through all the din of the great battle between truth and error. He becomes the reformer who, in this wayward youth of civilization, would inaugurate the mature reign of reason and peace, and, taking the common notions of charity, equality, fraternity, first broached in scripture and proper only to the communion of saints, proceeds to erect, over the very embers of revolution, like villages upon the slope of a volcano, his little sequestered arcadias, experimental utopias, phalansteries, communities, which we are invited to admire as actual models of Christian society and advanced samples of the millennium. False Messiah of the latter day, he cries lo! here, or lo! there, and would force the social passions into a hollow compact which is but like the truce of Herod and Pilate when Christ is to be mocked and crucified.

Thus the impatient on both sides are running into the like absurdity, and would precipitate the same evils. In so far as they prevail, they only fret the cords already strained between philosophy and theology, and threaten to wreck both Christianity and civilization in worse anarchy.

Against such impatience it need only be urged that the existing are not the normal relations of reason and revelation. While in the abstract they are har-

monious, yet, as at present developed and adjusted, they alike demand of their votaries a spirit of mutual deference and conciliation, and a system of preliminary rules of equal force upon both, in all their joint researches. Any forced combination of their several products, like that now so frequently attempted, overlooks their present anomalous condition, and is, for several reasons, to be discouraged.

1. It is at best specious and partial. Too often it consists of a mere rude welding of creeds with theories; devoid of any rational consistence, and leaving out large portions of fact or mixing others with mere conjecture. No cognitive system can be real and universal which simply accepts or rejects the results of research at the bidding of prejudice, and then works them into a fantastic composition to please a devout or philosophic fancy. Every attempt at a summation of truth which proceeds in the interest of either party, so far from involving a thorough fusion of knowledge with knowledge, can only issue in a crude amalgam of fact and hypothesis, of fiction and reality.

2. It is, in its mode of action, illogical. Instead of patiently waiting for a strict induction and full exegesis, it takes the existing, imperfect results of both, and blindly, without any reference to first principles, proceeds to combine them, forcing nature out of its sphere as a mere witness to scripture, and scripture out of its sphere as a mere witness to nature. So long

as a scientific speculation is not verified, or a theological opinion is not demonstrated, the risk must remain, that, in using either for the benefit of the other, we may be but driving truth into alliance with error. The known in both is alone that which can or does become consistent. Only when we have logically adjusted the relations of reason and revelation, and studied all the phenomena, upon which they are respectively exercised, in their vital connections, and without either philosophical or theological prejudice, will we be able to frame that summative system by means of which we may sift the ascertained from the conjectural, fuse the discovered and revealed, and so build the temple of knowledge with the lasting cement of truth.

3. It is, in its scope, premature. Without projecting any scheme of logical reconciliation throughout the rational and revealed sciences, but simply because their established portions here and there are coming into harmony, it goes precipitately to work upon the vast remainder, and would mold it at once into a system. And yet, we are now only in the first stages of the great affiliation. Fiercer strifes may still await us, in the more undeveloped sciences, than any we have survived. If astronomy could make such warfare, at the mere outposts of revelation, when it dwarfed the earth into an atom in space; if geology, at the walls of the fortress, strikes such a panic now that it threatens to reduce man to an ephemeron in

time; and if ethnology is actually jarring the foundations with its effort to degrade him to an autochthon in the scale of being; what may we expect, when, at length, the citadel is assailed by those sciences which, like biology, psychology, and sociology, having human nature for their subject, and involving all the great questions of human duty and destiny, shall impinge upon the most peculiar topics of inspiration, upon the actual contents as well as credentials of the heavenly message? He would be blind indeed to all the lessons of history, who dreams that reason and revelation have yet reached the limit either of their opposition or contribution to each other; and if we may be cheered by past triumphs, not less should we be warned to prepare for coming trials.

4. It is, in its whole practical aim, visionary. Not only does it presume, without any truly rational process, to have reached the final system of knowledge, but it hastens to organize it in defiance of the present social state. Whereas, even if it were the true ideal, it is not to be forced upon the world in the way of artificial reform and social reconstruction. When it comes, as it silently pervades the influential mind, it may bring with it an organizing force of its own, which, without visible concert, passing through and beneath all mere institutions, shall slowly dissolve and recompose the whole existing civilization. For aught we can tell, the present sys-

tem of church and state, with all its jarring sects and governments, may be left upon the pathway of time as a mere worn chrysalis, out of which society shall have struggled forth into new life and freedom, and the entire political organization of the race, at the time when the nations shall be fused in truth and tranquilized by love, have an aspect of patriarchal simplicity, or be molded into some new and homogeneous structure of which no type can now be found. But, whatever it may be, we can at least be sure that it is not to be wrought out of existing institutions, or by immediate efforts. Certainly no sect, political or ecclesiastical, now shows the means of assimilating all the rest as by sheer propagandism, or through any plastic force; and no theory of human perfectibility that has yet been broached could, by the mere display of its charms, lull the social tumult to peace.

We must therefore grant that the two parties, as now related, cannot at once be brought into a just, safe, and lasting union. By rashly overstepping the limits which still sunder them, and illogically proceeding to a forced compact of their several bodies of knowledge, they simply come into false relations, which must sooner or later dissolve and throw them apart again with harsh recoil and estrangement. Let not philosophy offend the oracle it would consult, by an irreverent spirit; and let not theology repel the intelligence it would claim, by an irrational process; but let each learn the other's virtues and laws, and

only join hands in the oneness of truth and upon the sure footing of mutual faith and love.

But now, in opposition to this class, and, perhaps, in reaction from it, appears the other, which we have called the despondents. These are the theologians and philosophers who despair of any reconciliation, and can but lament themselves as doomed to their present relations. The strifes and breaches between them they see no way of healing. From the ideal unity of truth they turn away to the actual disorder of knowledge, and wander amid its wilderness as in a maze of contradiction and anomaly; while, in the practical sphere, they are consistently led to disavow all attempts at social amelioration, and to give up even the hope of human progress.

The theologian of this mood will disparage not less revelation than reason. He looks upon both as belonging to an earthly and transitory state, and hereafter to be merged and lost in the rapt intuition and full apocalypse of truth. The one is so erring and the other so meager, he cannot hope they will ever together yield enough of knowledge to displace all ignorance, or indeed do scarcely aught else than show their own necessary imperfection. To combine the mysteries of nature with those of scripture, he will maintain, must only breed increased perplexity, and will bewail the present chaos of creeds and theories as but the inevitable and final state of earthly knowledge. Astronomy, in his view,

is only making the riddle of creation more complex; geology, vainly trying to be wiser than Genesis; ethnology, dragging the inspired genealogy back into the mists of fable; psychology, swaying in the paradox of fate and free-will; sociology, probing questions that belong to prophecy; and even divinity, sealing mysteries that require another revelation. His theology bids adieu to science as a lorn child of earth, and seeks some mystic elysium in the skies.

This type of despondent is a growth of modern pietism in its revolt from rationalism. Traversing, it may be, one after another, the speculative theogonies in which philosophy has striven to swallow up theology, he becomes appalled at her profane attempt to reconstruct the universe by mere logical process, and flies for refuge to some easy creed of paradoxes, retaining the mass of truths in a state of simple contradiction. And having thus cut the gordian knot of controversy, he thereby detaches himself in actual life from all resultant social movements. He is the ascetic who despairs of earthly society as hopelessly corrupt and irredeemable, or he becomes in some form and degree the millennarian, whose cure for its intellectual and moral disorder is a new miraculous dispensation to be inaugurated by the visible return and reign of Messiah, and who therefore takes the present dispensation as simply intercalated in order to sift out the elect from mankind, while all its accumulated sciences, arts, and polities are to be viewed as

mere splendid rubbish of sin, soon to be wrecked in the flames of a vast judicial conflagration.

Of like gloomy temper is the philosopher of the same class. He would disparage not less reason than revelation. In his view, they are both occupied with questions which are insolvable, and upon which together they can shed only enough of light to make the darkness visible; the one serving no better purpose than to show the unrevealed to be unrevealable, and the other no higher aim than to prove the undiscovered to be undiscoverable. He will even argue that their joint process must have its logical goal in the incomprehensible and unknown, and will cite the meager conclusions in which they unite as proof that all our knowledge is but a laborious learning of our ignorance. He finds no choice between the inspired and the speculative cosmogonies; between the myths of paganism and the miracles of Judaism; between the predestination of scripture and the fatalism of nature; between the millennium of the prophet and the utopia of the philosopher; and for him the unsearchable Jehovah and the notional Absolute are alike the unknown God. Science is to him but a cruel Sphinx, whose smile only mocks while it charms, and at whose feet even Theology must sit in dumb despair.

This type of despondent differs from the other in being a growth of modern skepticism in its revolt from dogmatism. Long familiar, it may be, with

those mystic theodicies by which theology has striven to supersede philosophy, he becomes disgusted at her fond effort to array the universe as a mere didactic marvel, and lapses to some bald creed of negations retaining in itself the merest fragment of truth. And having thus shorn away his whole faith, he loses all motive to humane exertion. He becomes the cynic, who sneers at the present social state as but a kind of tragic farce; or the optimist, who accepts it as fixed and unimprovable; or the fatalist, who dooms it to certain vast cycles or recurrences, like the stages of growth and decline in nature, and pensively sighs over the grandeur and decadence of empires, arts, and sciences as but the melancholy lesson of all human history.

Thus the despondents on both sides are falling into apathy, and would alike paralyze all effort. If they can be said to admit any question between theology and philosophy, it is only to adjourn it at once to another life, or reduce it to a nullity; while the whole existing civilization and Christianity they treat as simply experimental and abortive.

Against this last and most specious of the errors under review, it only remains to urge that the prospective must grow out of the existing relations of reason and revelation. Though neither is now in full harmony with the other, yet both are in an actual process of reconciliation. Far distant as may seem their destined coincidence, yet we are at least

at its beginnings, and may already strive for its accomplishment. The despair that, on account of some first failures, would abandon it, or postpone it to an ideal heaven or a future dispensation, is to be rebuked for several reasons:—

1. Its spirit is weak and ignoble. What if it be true, that all present knowledge must soon be lost in beatific vision, or be eclipsed by millennial glory, or is at best but confused and meager,—shall we therefore despise it, and make no effort to purge and increase it? Had the generations before us so thought and acted, where now would have been the Christianity and civilization which adorn our era? So long as we are on the earth, and members of the race it nourishes, it will be a high duty, as well as instinct, to swell the tide of truth in all lands through all time. Better far to toil after even an impossible ideal of knowledge, than to sink in supine ignorance; better to yearn after the boundless unknown as ever knowable, than to despair of it as unknowable. The worthy aim and rational goal of science is not nescience, but omniscience.

2. Its premises are narrow and unfounded. Because the rational and revealed sciences are as yet imperfect and discordant, it does not follow that reason and revelation themselves are defective and in need of some miraculous readjustment. We cannot, in fact, conceive of any better, or any other modes of cognition, than those with which we are

now familiar. A future state, wherein the soul is to seize the whole infinitude of truth by one swift intuition, or in one blazing apocalypse, is but the chimera of a devout fancy. As the Infinite mind has been gradual in unfolding the universe, so must the finite mind be gradual in reviewing it; and if the Creator passes through chaos to cosmos in the process of creation, shall not the creature, retracing that process, be oftentimes bewildered and worn ere he reach the vision and sabbath of perfect knowledge? It would seem to result from their logical relations to one another, that it is the function of the finite reason to recapitulate the Infinite Reason; that in this endless effort after the divine rationale of the universe, the sciences must ever proceed as now by joint intuition and experience, and in the order of the creative logic from the simpler to the more complex phenomena, from the radical to the composite forces, from mathematics through physics and ethics to theology—each resuming the one behind it, and requiring the one before it; that since this problem of creation, upon which they are engaged, has immensity for its scene and eternity for its scope, both celestial and terrestrial races are combined in the mighty argument on the basis of their present material and spiritual organization; and that there can be no pause nor retreat in their progress, but only an eternal approximation of that fullness of knowledge which shall be gained when all the

worlds of space shall have given up their secrets, and all the ages of time shall have unfolded their marvels, and God shall be all in all.

3. It ignores past progress. Appalled at the vastness of the unknown, it overlooks the known, and is blind to the immense advance of the present over former generations. Whereas, the actual history of the sciences shows that they involve a logical unfolding of the Infinite by the finite mind, and that the law of their evolution is a gradual return into that theology out of which they may seem to have been departing, whereby, through their own discoveries, they but authenticate the facts and prove the truths of revelation. Astronomy has already emerged from the mists of infidel criticism with an overwhelming exhibition of the God of scripture as also the God of nature, and the reasonable presumption is, that the whole train of the sciences in their normal order will follow, until the entire Deity as revealed shall be also demonstrated; that illustration of his natural attributes afforded by physics at length finding its crown and complement in a still more glorious illustration of his moral attributes at the hands of ethics. Even geology may yet elucidate Genesis, and sociology forecast the Apocalypse: the one by a scientific revision of the course of nature, and the other by a scientific prevision of the course of humanity. And when at length the terrestrial physics and ethics are thus complete, there will be the means of projecting that

system of celestial physics and ethics, through which to mount, in endless progression, toward the perfect theology, or science of omniscience. To suppose that this grand series could be rudely broken by a miraculous millennium, and so much of it as already lies in the past left without its logical sequel and complement in the future, would be to suppose an anomaly for which all nature could give no analogy, precedent, or palliation.

4. It mistakes the present social exigency. In all ages, the vulgar mind has craved prodigies and catastrophes rather than the ordinary means of Providence for the world's regeneration, and can still think of no better corrective of its existing moral and intellectual evils, than some new divine economy to be forced upon it by means of destructive judgments, involving vast planetary or political convulsions. In this respect, the despondent differs from the impatient only in seeking a miraculous rather than an artificial reconstruction of society. It may be vain to argue against such a vice of thought, blended as it often is with the purest faith and zeal; and yet there will, notwithstanding, always be those, having like faith and zeal, whom it fails to satisfy, and who are content to look for a millennium which shall be an intelligible triumph of the divine through the human reason, over all error and sin; a growing demonstration of truth, before which all false opinions and institutions shall slowly fade like mists and clouds of

sunrise, until the whole race is transfigured and the earth full of the glory of God. This view is to be preferred for several reasons.

(1.) It is more in keeping with the analogies of prophecy. No principle is plainer than that the transition of prophecy into history appears violent and dramatic only in prospect. As the Christian economy quietly resumed and carried forward the Hebrew economy, so the millennial economy may prove to be but the existing world as matured and perfected. Or if a destruction of the present physical system be within the scope of scripture and of nature, it would seem that it could only be with a view to some more glorious reconstruction, whereby the whole past shall be taken up again into the future, even as Providence has already erected the modern out of the ante-diluvian world, and yet left both the individual and the social constitution of the race unimpaired.

(2.) It is more in keeping with the analogies of history. All philosophic historians are beginning to conceive of the career of humanity as spiral rather than circular, marked by average progression rather than mere fruitless recurrences. Great men may live and die, empires may rise and fall, civilizations may flourish and decay; but the race itself, inheriting and transmitting from one generation to another, always survives, and, phenix-like, springs for bolder flights and grander prospects. Hebrew, Greek, and Roman ideas are still powerful in modern society, though the

nations which wrought them out have ages since perished. Can we believe, in the face of six thousand years of such progress, that the social system is to be arrested or destroyed? After all the advance that has been made in the lapse of time, will any millennium seem too distant or utopian to have its growth out of even this present world?

(3.) It is demanded by the organization of society. According to that organization, the progress of the arts depends upon the progress of the sciences, and the former come to fruition in the order of the latter. Already the physical arts are shedding a millennial splendor in the marvels of printing, steam, and telegraphy, while the remaining series begin to presage the decline of caste, war, and superstition, through the agency of commerce, diplomacy, and philanthropy. And it enters into the very notion of social regeneration, that this social structure should continue to be developed until its ideal is fully realized and the whole race is intellectually, morally, and physically transformed. Upon any other terms, a millennium, properly speaking, is simply inconceivable.

(4.) It harmonizes the otherwise conflicting interests which science and religion have fostered. Instead of abandoning both, or postponing both to some vague, far hereafter, it begins at once to practically unite the natural and the supernatural, the terrestrial and the celestial, the human and the divine. In

its light, heaven is found to be but the full flower of earth. The kingdom of the heavens is that realm of planets, suns, and stars to which the earth is both spiritually and materially linked, of which now we have only some hints from celestial mechanics and chemistry, but which shall yet be more fully unfolded by celestial sociology and theology, as the abode of our Father who is in the heavens, of whose Son the whole family both in heaven and earth is named. The world to come is to be thought of as being historically developed out of the world that now is, and the life of the individual so bound up in the life of the race that both have their resurrection together, whensoever the spiritual so predominate over the material forces of the planet as to transfigure it into an abode of truth and righteousness. Even the coming of the Son of Man to judge both quick and dead, and the triumphal meeting of saints and angels in the skies, may be viewed as not less a crisis than a pageant; the rational blending of the earthly into the heavenly history; the winged globe bursting from its chrysalis and blazoning its cross among the stars.

We therefore now conclude, after a full survey of all modern opinion, that the two kinds of knowledge by which it is divided are not only reconcilable, but actually being reconciled. Let neither the philosopher nor the theologian despair of their ultimate coincidence, but rather let both strive together to effect it, and therein hail at once the thorough fusion

of Christianity and civilization, and the practical union of earth and heaven.

And now, in the course of ages, through the divine wisdom and goodness, the time seems at hand when this great truth is by them both to be seized and applied. The world is fast ripening for the issue. After six thousand years, it presents at length the two realms of Heathendom and Christendom under the two phases of barbarism and civilization, marshalled as if for the last conflict of error and truth; and it remains to be seen whether, through the union of religion and science, civilization is not to be transfused with Christianity, heathendom supplanted by Christendom, earth joined to the kingdom of the heavens, and mankind brought into the family of the Universal Father.

Nor could there be conceived a problem more sublime and momentous than that which is thus given to our age to solve. To ascertain the respective spheres, prerogatives, and methods of human reason and divine revelation; to adjust their reciprocal relations on principles binding upon the adherents of both; to apply such principles throughout the sciences to all pending controversies, with the view of sifting error from truth; to gather by this means evidence of a growing harmony between the two great bodies of knowledge, as they accumulate and advance, supporting, interpenetrating, and illustrating each other; in a word, to gradually heal that im-

mense schism which for centuries has been stealthily invading the most cherished opinions and interests of mankind, and thenceforward to link the divine and human reason, in their joint process through coming ages, against all earthly error and sin,—these are objects which have only to be stated in order to be felt in all their moral value and grandeur. They are not the transient concerns of any calling, sect, or party, but the lasting and catholic interests of humanity. And though no single mind or generation may achieve them, yet the bare conception and attempt would themselves be their own sufficient reward. To be simply living at a time when such an ideal is but beginning to dawn among men, must seem to one who rises to its full comprehension, the richest boon that has yet been conferred upon them, and, in the first joy of its discovery, he might almost tremble lest it be too good and glorious ever to become real, or through some fault or want in nature, should fall short of fulfillment, could he not find, on surveying the scale and resources of creation, that the order of the world is not less fixed than is its progress sure.

What is now needed is no new system or school of philosophy, but rather the discovery and announcement of vast movements of the philosophic mind, involving all schools and systems in their sweep, and destined, after centuries of hidden growth, to be brought into conscious activity and visible co-operation. The field of research, like a quarry

wrought by successive generations, already lies strewn with fragmentary truths, which are as the chiseled stones of a structure hitherto without model even in the fancy of the builders, as they wrought apart each at his own task; but now, at last, the plan of the Divine Architect is to be displayed, the master-workmen in each science marshalled, and the perfect temple of knowledge reared, to the glory of God and for the good of mankind.

This mature effort and final task of the human mind may be anticipated under the name of the ultimate philosophy, or that last summative science which is to be the fruit and goal and crown of all the sciences, as well as the means of their highest use and grandeur. Before the cognitive instinct can be satisfied, and the mass of knowledge rendered exact, coherent, and operative, the sciences themselves must be made the subject of science; must become the material, as well as instrument, of research, and their product, like other phenomena, be brought within the sphere of rational prevision and control. If we could imagine them perfected singly and apart, there would still remain the work of bringing them into logical connection, organizing them as a compact system, and concentrating them intelligently upon the social well-being; but this work really enters into their growth as well as fruition, and is so essential, they may as little thrive without it as branches severed from a common tree. To discover these vital relations

among them, to arrange them in their normal order, to distinguish their kinds, measure their resources, ascertain the laws of their evolution and interaction, and at length frame a theory by means of which their whole historic procedure may not only be reviewed and foreseen, but itself corrected, guided, and matured.—this is the ideal of the ultimate philosophy. Itself the latest offspring of science, equipped with all means and modes of knowledge, it aims to traverse the entire domain of intelligence, everywhere sifting the known from the unknown, and gathering the fragments of truth into an intelligible and consistent whole. It is, in a word, that science of science which science itself shall yield, and wherefrom are to be shed upon the world the full flower and fruitage of reason.

The conception, the necessity, the utility, the rise and growth, and the method of this ultimate philosophy, are topics which may be discussed at length hereafter. Three great works or efforts are included in its project: 1. Its construction out of the sciences. 2. Its application to the sciences. 3. Its consummation of the sciences. These we here simply propound as themes, condensing into sentences what may be expanded into volumes.

The work of constructing the ultimate philosophy may be projected as follows:—

It must begin with an *Expurgation of the Sciences*. By this is meant the sifting from them of those pre-

judices, physical, metaphysical, and theological, (the *idola theatri* of Bacon,) which are the offspring of their own rank growth and schismatic culture, and which now hinder direct access to the whole body of knowledge as it lies scattered among the different professions and in various departments of learning. When the eye of reason is thus purged of all films of conceit and passion, and the prospect cleared of every mist and cloud of error, it will be ready to embrace in one view the whole field of truth, of whatever sort and wherever found.

The next step will therefore be this *Survey of the Sciences*, or particular examination of their several provinces and products. This will include the history and logic of each species, and a consequent classification or arrangement of them, which shall be accurate, complete, and consistent, which shall neither degrade the physical sciences as in German philosophy, nor the metaphysical as in English philosophy, nor the theological as in French philosophy, but annexing the physical to the metaphysical, and complementing both with the theological, shall exhibit them together in the order of nature, of history, of reason, and of sound culture. They will thus be fully digested and prepared as the material of induction, or as the intellectual phenomena to be studied and explained.

It will then only remain to frame a *Theory of the Sciences*, or doctrine of perfect knowledge. This

may here be briefly stated in the form of several postulates: 1. There are, and can be, but two kinds or modes of knowledge, with their correspondent spheres of cognition; the one a knowledge of the laws of phenomena, and the other a knowledge of their causes; the one empirical, and the other intuitional; the one derived from reason, and the other from revelation. Astronomy is the most perfect example of the former, and theology of the latter. 2. These two modes of knowledge are neither repellent nor indifferent, but connected and complementary, and together form the sum of the knowable in respect to every class of facts. Astronomy, for example, is both discoverable and revealable, though in unequal proportions, being at once a human system of celestial physics and a divine manifestation of our Father who is in the heavens; and either would be incomplete or unsupported without the other. 3. These two modes of knowledge correct each other by their own interaction, and, both logically and historically, tend to ultimate coincidence and harmony. Revealed theology already accepts the discovered astronomy which it once repelled; and discovered astronomy still requires the revealed theology which it has abandoned. 4. The knowledge of laws and the knowledge of causes must both, at last, be resumed in the knowledge of God, the First Cause and Highest Law, in whom all phenomena rest and move with perpetual and manifold reflection of his glory. In

other words, ontology or theology is the keystone of that nomology and aetiology which must meet in it to form the triumphal arch of perfect knowledge, or else remain a mere fragmentary mass of truths without rational support and consistency.

Thus, according to our doctrine of knowledge, the sciences, when thoroughly expurgated and surveyed, may be reduced from a mere medley to a system in which their procession shall correspond to that of the phenomena with which they are concerned; the law of their growth shall be a gradual coincidence of reason and revelation; their perpetual effort shall be a logical review of the divine by the human intelligence through all the categories of fact from the mathematics, in which the universe has its primordial root, to the theology, in which it finds its perennial flower; and their goal, ever to be approached but never attained, shall be that omniscience wherewith, looking back as with the eye of God through all his word and works and ways, we shall know even as also we are known.

With the formation and verification of a theory of the sciences, the work of constructing the ultimate philosophy would be accomplished. And it would mark the utmost limit of human cognition. Reason will have entered its last province when it thus retires to reflect upon its own product. The speculative propensity will have attempted its crowning task when it thus seeks the law of its own action and

clearly proposes to itself the ideal of its own ceaseless aspiration. Science will have no other, as it could have no higher aim, when it thus strives to know itself. Let this first work therefore be called the science of the sciences.

But if we now suppose such a theory to have been propounded, we will not be content to cherish it as a mere toy of speculation or creature of the philosophic fancy, but be ready to return with it among the sciences from which it was drawn, and apply it as an organ of their further culture, or as the means not merely of observing and explaining, but also of correcting and maturing their processes, of making the imperfect profit by the mistakes of the perfect, and giving them, as a whole, a more precise, concerted and accelerated action. In other words, having framed our doctrine of the cognitive and the cognizable, it will then remain to bring the former systematically to bear upon the latter.

This next work of applying the ultimate philosophy may be projected as follows:—

As a preliminary labor, there should be a *Logical Partition of the Sciences*, with a view to their more systematic culture. The arbitrary divisions and assumptions which now prevail among them not only dismember the body of truth, but lead to ill-directed researches and strifes of words; but when they are cultivated in their normal order and with reference to their ideal unity, their growth will be more regular,

vigorous, and fruitful. Now, according to our theory, their normal order corresponds to that of the inter-dependent phenomena which are their material; and their ideal unity results from two opposite modes of knowing or explaining those phenomena, ever tending to logical union in a third. When, therefore, we have thus mapped out the intellectual domain as it lies in nature itself rather than in our crude fancy, we may proceed to devise three sets of rules for the three kinds of intellectual labor to be performed therein.

The first will consist of *Axioms of Nomology*, or precepts for pursuing and perfecting our knowledge of natural laws. They will be of various classes: 1. Those which apply to nomological science in general, the philosophy of inductive or positive research. 2. Those which apply to the physical sciences in particular, as mechanics, chemistry, and biology, in both their celestial and terrestrial divisions. 3. Those which apply to the metaphysical sciences in particular, as psychology, sociology, and theology, in both their celestial and terrestrial divisions. This part of the scientific discipline, when complete, would include a system of rules for connecting every class of facts with their laws.

The second part will consist of *Axioms of Aetiology*, or precepts for pursuing and perfecting our knowledge of causes. They also will be of various classes: 1. Those which apply to aetiological science in general,

or the philosophy of both speculative and exegetical research. 2. Those which apply to the *palaeiologial* sciences, as cosmology, geology, anthroplogy. 3. Those which apply to the *telætiologial* sciences, as soteriology, ecclesiology, eschatology. This part of the scientific discipline, when complete, would include a system of rules for connecting every class of facts with their causes, both first and final.

The third part will consist of *Axioms of Ontology*, or precepts for pursuing and perfecting our knowledge of both laws and causes as combined in God. These, of course, will be the complement of the two previous systems of rules, and designed to support them both in a course of consistent application throughout the border fields of rational and revealed science. They, too, will be of various classes which are here only named in connection with one or two examples. 1. Axioms which apply to the *normal* relations of reason and revelation; such as, (1.) The proper interaction of reason and revelation ever involves the expansion of science toward omniscience. (2.) As we ascend the scale of the sciences, the need of revelation increases while that of reason decreases. In the basic science of astronomy, reason is paramount; in the summary science of theology, revelation is paramount; while in the midway science of psychology, the two are equal. (3.) Throughout the scale of the sciences they complement and support each other. 2. Axioms which apply to the

existing relations of reason and revelation; such as, (1.) Exegesis and induction are mutually corrective, according to the normal right of either to ascendancy in any common sphere of research. (2.) Creeds are mere theories to the philosopher; theories are mere creeds to the theologian; and, so long as they are in conflict, all that can be attempted is a provisional reconciliation by exhibiting the problem of opinion. (3.) To whatever extent philosophical and theological opinions modify each other, and the technical dialect in which they speak, the language of scripture only gains rather than loses in veracity, expressiveness, and power. 3. Axioms which apply to the *prospective* relations of reason and revelation; such as, (1.) The law of their historical evolution is that of decreasing opposition and increasing contribution to each other. Not only do discovered facts, in every science, already both require and uphold revealed truths; but even its antagonistic theories are only "oppositions of science, falsely so called," and destined, by their own self-destroying conflict, to sift the true from the false and blend the discovered with the revealed. In geology, for example, we now have the two rival theories of the Catastrophists and the Uniformitarians, one of which would leave existing interpretation undisturbed, the other of which would call for its modification, while both can only issue in some new illustration of the great truth, that "In the beginning God created the heavens and the earth."

(2.) The cumulative evolution of the sciences in the order of the connected phenomena to which they refer, involves a cumulative illustration of the divine attributes in the order of their manifestation and dignity, beginning with the astronomy which discovers a celestial Mechanician, infinite in power, and ending with the theology which reveals a celestial Father, infinite in love. (3.) As all natural phenomena are but divine manifestations, their beginnings, courses, and ends must, in the last analysis, be referred to that divine reason from which the universe has logically proceeded, and through which alone it can be logically recapitulated. This third and last part of the scientific discipline, in order to be complete, would include a system of rules for connecting every class of laws and causes with the one supreme cause and law of all facts, the Author and Ruler of the universe.

Thus the true organon of knowledge, whosoever attained, will rescue the cognitive mind from those irregular and conflicting researches with which it is now blindly sallying over the field of truth, and, everywhere adjusting the system of thought to the system of things, and leading the finite upon the track of the Infinite Reason, will slowly realize, through endless ages, in the soul of the creature, for the glory of the Creator, the grand ideal of the whole creation.

By means of a complete organ of the sciences, the

ultimate philosophy would be thoroughly applied. And the discipline of the human intellect would then be perfect. Reason will have become a faultless instrument of research when it thus moves by a trained logic as well as with a true aim. Science will have grown to be its own master when it thus guides as well as knows itself. Let this second work therefore be called the art of the sciences.

But so soon as we imagine such a scheme of axioms devised and employed among the sciences, we shall see that the tendency will be not merely to build them up into an ideal system as for philosophic pastime, but to effect their logical organization, practical equipment, and the actual endowing of mankind with all material and moral as well as intellectual riches. Such is the connection between theory and practice, science and art, truth and goodness, that whenever the whole cognitive shall have thoroughly acted upon the whole cognizable there must issue a vast and homogenous body of knowledge, fraught with inconceivable utility and grandeur. In other words, the science of the sciences and the art of the sciences will need to be crowned with a science of their corresponding arts, or doctrine of perfect knowledge, as practically applied. (See APPENDIX.)

This last work of consummating the ultimate philosophy may be projected as follows:—

In its initiatory stage there will no doubt be a clearer and more general apprehension of those social

laws by which science or exact knowledge becomes effective in moulding human opinions and institutions. So long as the artificial organization of society proceeds blindly, its action must be abnormal and wild; but when the intellectual and moral conditions of true order and progress are demonstrated, we may at least foresee, if not actually hasten, the grand issues of the whole human development in its vital connections with all terrestrial and even celestial influences.

The first of these issues may be termed the *Ultimate Cyclopaedia of the Sciences*. All previous organizations of the body of knowledge share in its existing schismatic and fragmentary state. Instead of building the temple of truth after the model of things, they exhibit creation as but a disjointed fabrie, wrought out of the crude and composite material of creature fancy. Instead of exactly imaging the outer world of fact into the inner world of thought, they show it only in dim and broken reflection as marred by conceit and error. But when all phenomena are studied in their actual successions and coexistences, and not in mere detached portions, and the sciences are partitioned and cultivated accordingly, as an organic whole, then will the chaos which the universe seems to the human mind be changing to the cosmos which it is to the divine mind, and reason be fairly embarked in her career of ever nearing, though never reaching, that height of infinite knowl-

edge from whence, by means of her mechanics, chemistry, and biology, she could review and forecast all material life, whether of atoms or of orbs, and, by means of her psychology, sociology, and theology, she could review and forecast all spiritual life, whether of terrestrial or of celestial races. "Now we see through a glass darkly, but then face to face; now we know in part, but when that which is perfect is come, that which is in part shall be done away."

In close connection with this issue will also be unfolded the *Ultimate Cyclopaedia of Arts*. At present, anything like a more systematic control of nature, by means of a more systematic knowledge of her connected laws, is scarcely thought of as open to human aspiration. As the sciences, broken and jarring, extend only to detached phenomena, without including their vital relations, so the corresponding arts, or means of modifying those phenomena, are in like manner partial, irregular, and conflicting. The frame of nature is forced to work but in piecemeal for her still unskillful master; and it is only in the electric telegraph that we have any hint of a more cosmical power. But when the sciences are logically organized, and the arts begin to flow from them as foregone aims rather than mere incidental trophies, and with concerted action furthering each other, then will our increasing knowledge be ever yielding increasing control of all surrounding phenomena, and man be rising toward the predicted dominion over creation. The-

ology will be giving that art of religion by which Providence predominates over society, and sociology that art of polities by which society predominates over the individual, and psychology that art of ethics by which mind predominates over matter, and biology, chemistry, and mechanics, those arts of terrestrial economy by which the whole material system is wrought anew for human service and divine glory.

And last of all, as the grand aggregate result, there will issue the *Ultimate System of Society*. Both the sciences and the arts are but functions of society, and by their degree of perfection determine its state and progress. As yet the most advanced civilization, racked and torn by conflicting ideas and interests, only reflects the existing disorder and defectiveness of knowledge and consequent waste and turmoil of skill. The whole modern organization of mankind is crude, forced, and heterogeneous, though already an immense advance upon that of antiquity. But when the seried sciences shall be shedding forth their seried arts, and all human societies be growing together in the knowledge and the mastery of their own phenomena, and of the cosmic phenomena upon which they act, until they are brought into harmony with nature and with God, then will a regenerate race be installed as the living head of the whole terrestrial organism, and the reins of the orb be exultingly gathered in its hands as it careers in the olympic race of worlds.

Then, too, may even the celestial sciences begin to blossom with celestial arts that shall knit together, in spiritual sympathy, all celestial races. Terrene, solar, and stellar influences, wielded by human prowess and prayer, may unfold the commerce of heaven, the telegraph of the skies, and the worship of the one universal Father, until the ripe, scient earth echoes back the anthem that erst hailed her novitiate, when “the morning stars sang together and all the sons of God shouted for joy.”

Thus, in the consummation of the ultimate philosophy, will be involved the consummation of all things earthly. Science will then have triumphed over error, and art over nature. Reason will then have unfolded the whole riddle of the world, from its genesis to its apocalypse; and that cosmic ideal toward which the Creator has been moving through mighty epochs of creation, from the primordial planetary germ, by means of successive strata, floræ, faunæ, and human nations and races, will at length stand forth revealed in the fullness of its life and glory.

At the height we have now reached, how wide the horizon! how grand the prospect! As from a lone eminence of faith, where the whole past and present and future of our race is spread out at one view, we look down upon that divine system of the world in which the end is known from the beginning. We see long ages rolling onward ere it shall all be fulfilled, vast

literatures and civilizations shed like forest leaves in its fulfilling, and unspeakable glories crowding thick and fast to its fulfillment, until, blinded by the vision, we almost wonder that mortal may gaze and live. But we will not doubt His fatherly goodness, who, having shown unto his human children even the far-off stars in their destined courses and periods, will surely deign not less that they should scan the track of his earthly promises, and give them some Pisgah where they may lie down and die content that other generations shall enter into that for which they have toiled.

And hence it behooves us next to consider, as being our part in this ultimate philosophy, the more practical questions of the time, the scene, and the mode of its inauguration.

For the *time* of its inauguration, all history points to the present age. An era, so fraught with marvels and rife in great movements, might well be crowned with this last and best birth of time. And we have only to review the past and survey the present in order to see that what could not hitherto, may at last now be hopefully attempted.

It could not have been undertaken at any previous period. The two great reformations, the one theological and the other philosophical, of which Luther and Bacon were the leaders, had first to proceed apart to their extremes, and so develop the existing need of their combination. At their spring and while in their incipiency neither feared or craved the other.

Both were intent only upon freeing reason from its trammels, whether ecclesiastical or scholastic, and could not then foresee its present license or discord, or the necessity which has thus arisen, of training it to study science itself, with the same directness, patience, and candor, wherewith they trained it to study nature and scripture.

It is indeed true, that in advance of the exigency, that august and prescient mind which planned the *Instauratio Magna* would seem to have propounded the very task which is now imminent, or at least so much of it as relates to the natural sciences, though with no real expectation of seeing it then accomplished. “The sixth and last part of our work, to which all the rest are subservient, is to lay down that philosophy which shall flow from the just, pure, and strict inquiry hitherto proposed. But to perfect this is beyond both our abilities and our hopes; yet we shall lay the foundations of it and recommend the superstructure to posterity.” And it is now easy to see that the “universal and complete theory” which with just forethought he pretended not to offer, could not have been framed or even attempted, until the sciences should have reached some measure of perfection, and out of their own lack of consistency and order clamored for law and system.

But now at last this need and preparedness for the great effort have arrived. If we examine, we shall find that each of the three works here projected as

necessary to the completion of philosophy may at least be begun, if not pursued to a good degree of forwardness.

Have we not already the materials of a theory or doctrine of perfect knowledge? The map of the intellectual, like that of the physical globe, is almost complete, with scarcely a *terra incognita* to be explored, and philosophy might well reach her ultima thule in conjunction with geography. In other words, the exact limits of research may be said to have been ascertained and its several provinces defined. All the sciences at least have a name, are in various stages of progress, and fast coming into new and fruitful relations. Attempts even have been made to discover and impose upon them that system to which they are presumed to be tending. And if such forward minds have hitherto failed, it has been partly because it is only through repeated failures we can pass to success, and also because they have not brought to their task that catholicity, candor, and patience which are the cardinal virtues of the philosophy they espouse, but have allowed some metaphysical or theological prejudice to hinder a just induction, and vainly tried to force upon science, as the old scholastics tried to force upon nature and scripture, some partial and foregone theory. They have either exscinded the knowledge which has been revealed or the knowledge which has been discovered, and so announced pretended laws of scientific development

which both history and reason falsify. But the very fact that efforts in this direction are put forth, and that even these crude, tentative hypotheses have yielded such brilliant results, augurs the full success that is at hand. After long ages of philosophical discipline and the accumulation of a mass of sciences extending to every class of phenomena, what now remains but that the inductive spirit should return upon its own intellectual product, in search of that sublime theory of cognition which is to be its crowning triumph, and at length set forth as the matured reason of the race and the destined apex of the pyramid of knowledge?

Have we not also, in large measure, the means of framing an organ of perfect knowledge? The cognitive mind, now grown experienced in all modes of research, has already garnered a store of principles and precedents wherewith to enter intelligently and authoritatively the more imperfect sciences, and preclude the waste and error and confusion which marked its infancy. Master builders in the art of constructing science, one after another, have tried their hand upon the model, and given well-tested rules for the actual building. In inductive philosophy we have a line extending from Bacon to Comte, and in speculative philosophy, another from Kant to Hegel; while the very extreme into which the two latest thinkers have pushed their respective methods has already created the need of that third and last philosophy which

shall mediate between them, and lead them back from their errant courses within the just and safe limits which they impose upon each other. Though our philosophical literature is as yet wanting in this latter department of sciential thought, and there exists scarcely a treatise which can command the equal respect of both sects of disciples, those of reason and those of revelation, yet there is a craving among each after the laws of their latent affinity and the terms of their ultimate agreement. Now that so much of thorough drill has been infused among the different votaries of science, who doubts but that the logical spirit shall soon enter also their border feuds, and at length devise and publish those perfect canons of research by which the whole host of seekers for truth shall be marshalled as one mighty phalanx for the final career of eternal progression?

And may we not even begin to forecast the actual scheme and issue of perfect knowledge? Although that matured humanity which must result from matured intelligence has hitherto been aspired after only by elect minds, as but a vague ideal, and with faint presentiment; yet now, at last, the prospect grows clearer and surer and thrills even the popular heart. By a few, at least, the vital connection between society and science is seen to insure the perfection of the one in that of the other. And as we feel that pulse of humanity which ever beats onward, and survey the wreck of systems in which fond

visionaries have sought some airy tower of prospect, we can but devoutly hail, even if still afar off, the dawn of that era which the seers and saints and sages of all time have longed to see; and, entering with new joyfulness into their sacred prescience and prayer, proceed to labor as well as yearn for the great consummation.

Thus have we been brought to that fullness of time when Providence seems waiting to give the reins of the world to ripe reason, and is summoning us to enter with faith and hope upon the impending task.

For the *scene* of its inauguration, philanthropy selects the western hemisphere. A clime so strangely hidden for ages from mankind, would seem but the destined theater of these later acts of history. And we have but to scan the map of the world to find that what could not elsewhere may here be practically initiated.

It could not originate in the eastern hemisphere. The two diverse civilizations—the oriental and occidental—representing the practical issues of the two diverse philosophies—the intuitional and the logical—having proceeded apart for six thousand years on opposite sides of the globe, must meet as in completed circuit on some virgin soil and common ground ere their joint mission can be accomplished. While still in their native seats neither can thoroughly sift and appropriate the other. Both are there hampered by

inveterate prejudices and contracted relations, and must continue to have something of extravagance in their development; the one toward mysticism, and the other toward skepticism; until thrown together on a new arena where they can find ampler scope and freer action.

It need not, indeed, be denied that in European civilization the eastern and the western mind, the religious and the scientific spirit, have already for eighteen centuries been combined; but this very combination has at length only shown an exigency which it cannot meet, and materials which it cannot use upon its own soil. The rigid social, national, and political distinctions of the Old World, to say nothing of its meager physical location and structure, preclude that collection and fusion of all the elements of humanity which is to be the work of the true cosmopolite philosophy.

But in this western hemisphere not only are such elements far more varied and abundant, but the facility for their recombination is perfect. The American geography, genealogy, polities, and religion are simply unparalleled, either in ancient or in modern civilization, and together form an aggregate of all that is peculiar to Europe, Asia, and Africa. Such a medley of climates, of races, of institutions, of creeds and systems, fusing under one political system, affords materials for a philosophy which cannot but be final,

and, by its projection on a grander scale and with fuller conditions of all the time-worn issues of history, shows that here, if anywhere, the whole cosmical problem is at length to be solved. Who that surveys this wide intellectual and social anarchy and the swift and intense passions pervading it, but must feel that, sooner or later, the plastic spirit of human opinion which, ever strengthening with the growth of reason, has wrought through all the past, disorganizing and reorganizing successive civilizations, must at last educe order from this chaos, and mould the ideal reign of truth and virtue?

Thus has Providence already opened and garnished the stage whereon to unfold that consummate system, which, as it is to be the flower of all thought and fruit of all climes and ages, can be called after no name, however worthy, and claimed by no people, however illustrious.

For the *mode* of its inauguration, philosophy ordains the academic curriculum. The educational system, being the primal fount of knowledge and influence, affords the normal method of turning the grand ideal into a reality. And but a glance at the existing social structure will show that it alone is competent to the task.

There is an obvious unfitness in all other agencies. The professions and the press, being distributors rather than contributors of new ideas, and reflectors

rather than manufacturers of opinion, as well as liable to be swayed by disturbing interests and passions, are too low down in the scale of social influence to reach the springs of existing evils. A movement which is to cure them by harmonizing philosophy and theology, must originate beyond the sphere of popular prejudice, in that quiet circle of thinkers and scholars where truth is prized for her own sake, and sought with the zeal of the votary. The tactics and the drill of this warfare are not to be learned amid the smoke of battle, by the mere tyros and bigots who are in such haste to practice them, but must be brought thither by those who have been schooled into philosophic tastes and habits.

This at least, it may be safely affirmed, is the judgment of intelligent conservatives, who are in the field and acquainted with its wants. There is a growing feeling throughout the educated classes that the crisis has become too grave to be continued as a mere topic of periodical review or theme of professional declamation. What pastor, lawyer, or physician, if he has the time or taste, feels competent to grapple with the great question in any of its branches? He encounters at once the suspicion of having got beyond his province, and is sure of the contempt of one or both parties, if only because of his supposed unfitness and prejudice. The work has plainly reached the importance of a special cause, calling for

special qualifications and the devising of new appliances, more fixed and organic than any now in use.

It should not indeed be overlooked, that this craving has already been long expressing itself in a rich and growing literature, partly in the interest of philosophy, and partly in the interest of theology, and sometimes by the institution of prize-essays and lectureships, which are directly aimed at the work of their conciliation; but whatever success has hitherto attended such scattered and irregular efforts only lights the way to others that may be more direct, lasting, and effective.

It is by means of academic training alone that the whole social organism can be reached and cured of its present vicious and morbid action. The true university is its brain, receiving from professorships and distributing through the professions ideas that rule the masses; and according as it is sophisticated or purified will the whole body be either depraved or ennobled. In other words, we have only to recur to the social evils described as the issue of the great schism in modern philosophy, to see that they can only be met educationally, by special courses of study and instruction, at the seats of culture where they stealthily and unwittingly originate and are often unconsciously harbored.

It is there that we must seek the unity of science. She gathers thither her votaries to endow them with

her riches, and assign them their tasks, and so long as she presents but a divided front and ranges them in opposite ranks, must the breach between them be only widened; but in proportion as both the rational and the revealed sciences are studied in their actual connections, and brought into some logical relationship; as fast as the former are made to illustrate the character, policy, and purposes of the God of revelation and the latter are established in harmony with all the discoveries of reason, will they be found to be but branches from one root of knowledge, living and growing in the truth.

It is there, also, we must seek the catholicity of learning. From thence the youthful mind, while forming its intellectual habits, and ere it has been narrowed by professional prejudice, receives its life-long bias; and only by diverting it from its present tendencies toward either skepticism or bigotry, can the whole educated class be imbued with a spirit of large and generous culture.

And it is there, too, we must seek a salutary influence upon all the great interests of religion, polities, and art. Let the salt of truth be cast into these living fountains, and the stream of intellectual and moral corruption will be cleansed; the evils of the church, the state, and the life will be cured; and a current of new and vitalizing ideas poured throughout the whole social body. Though now all surrounding

civilization seems based in error and ignorance and swayed by conflicting opinions and prejudices, still we need not fear but that the spirit of truth, training and marshalling her votaries in such sequestered haunts of culture, shall yet lead them forth as a disciplined host, even into the thick of this great conflict, and there proclaim her destined rule of order, law, and love.

The practical objection may here be raised that an academic field, so wide and rich, would demand an amount of research and erudition in the teacher, and a degree of maturity and scholarship in the pupil, which are quite impossible.

To the former part of the objection it is enough to reply: 1st. That the aim need not be to traverse the two great divisions of knowledge throughout their whole extent, but merely that intersected portion of them where they are involved in a kind of border warfare. 2d. That into this common field it would be needful to enter only with a resumé of established truths and principles, rather than with special researches and acquisitions. 3d. That to master the abstract part of any of the sciences, what may be termed their philosophy or logic, does not require learning so much as thought and study. 4th. That those very faculties of abstraction, generalization, and comparison which would qualify for such a task, would almost disqualify for any other, and be hin-

dered rather than stimulated by minute investigations. There are, moreover, abundant helps to the work to be found in standard treatises of authority with both schools, in compends of their several attainments, and in a current literature, teeming with the richest and most varied contributions.

To the latter part of the objection it may be replied: 1st. That it enters into the scope of all academic life to increase as well as diffuse the existing stock of knowledge. 2d. That in fulfilling this latter aim, there is always a vast amount of instruction which is simply stored rather than at once digested in the mind of a student. 3d. That the efficiency of such teaching would, after all, depend upon the stage in the curriculum at which it should be introduced, and the personal enthusiasm with which on both sides it is conducted.

We are thus led next to inquire as to the particular form which such academic training should assume, or the best method of incorporating it in existing systems of education.

And here the general principle is obvious, that it belongs to the more advanced stages of pupilage, and should accompany or follow special training in the two departments it aims to unite. It could only, in order to be directly effective, come after a gymnastic or sub-graduate course, and would defeat its own aim if addressed to immature and unfurnished minds.

According to the theory of the true university, it would be the proper supplement or complement of the three faculties of law, medicine, and theology, and might appear among them in the form of a summary professorship, designed to take the results of other professorships, and, after recombining them, transmit them through the professions into the sphere of practice. Such a device would not only act as a fixed, aggregating center of those border topics by which the professions are logically joined together, fostering the commerce of ideas among them, though without hindering that division of labor in which they thrive, but it would also, by its bearing upon all contemporary intellectual movements, remain as a watch-tower and bulwark of truth on the field of error.

If the theory seem somewhat visionary as applied to our American system, this may only serve to show at once our danger and remedy. There could not, in fact, be more striking proof of our need, motive, and opportunity for the great reconciliation, than is yielded by the history and present state of the academic curriculum. That schism, which in the European universities has issued in no outward dissociation of the band of scholars, has spread through our whole scheme of education as a visible breach, until at last both philosophy and theology seem to have lost their normal rank and power, and the very words

are turned by their respective followers against each other with something of suspicion. We have two classes of institutions—the secular and the sacred, the civil and the ecclesiastical; and in both the work of disruption has been going forward. Theology has been driven from the former by the gradual ascendancy of the classics or mathematics over the old metaphysics with which it was once associated; and philosophy has been driven from the latter by the degradation of the study of divinity to a mere professional and sectarian training of the clergy.

And hence the first question to be met in attempting their educational fusion is as to which party the initiative should be given; whether the movement should come from the theological or from the philosophical side, in the interest of religion or of science, as an ecclesiastical or as a catholic effort. The whole effect of such academic study will plainly be modified according as one or the other of these points of departure is taken.

In a purely theological course, it would appear as a branch of apologetics or polemics; and the aim would be not merely to uphold the general authority of scripture, but also of some particular creed or confession drawn from scripture in its contact and conflict with the human sciences. And this chiefly as a kind of armor and drill, for the battle with heresy and infidelity.

In a purely philosophical course, it would appear as a branch of logic or metaphysics; and the aim would be, ignoring all creeds and sects, and placing the revealed on a footing with the rational sciences, to define and defend the prerogatives of each in its own domain, and to exhibit their joint product under a scientific rather than a practical aspect, and in its due place and connections in the general body of learning.

In favor of the latter as compared with the former, several reasons may be urged.

1. It is the more natural and reasonable method. A work of mediation involves mutual concession; and if this great movement must be initiated at either extreme, it has a clear right to come from the scientific side, where it originated, and should be met and welcomed. It is in fact a concession which we not only can afford to make but must make, that revealed truths are as susceptible as natural truths of rational support and confirmation, and may also be safely taught without regard to their practical applications, or to the transcendent interests they involve, and in entire freedom from all prejudice, as pure matters of abstract rather than of applied science. If the great fundamental tenet of inspiration cannot base itself in scientific discovery, but is doomed to be steadily undermined, then the whole superstructure of the revealed sciences must crumble with it into

ruins, as mere superstition and bigotry. While we are unwilling that savans should force their theories upon us as creeds, we must permit them to treat our creeds as theories until found consistent with science. We need not fear, that practically and personally the one party will be any the less moral, religious, and orthodox, or the other any the less learned, humane, and philosophical, on account of such a problematical state of their relations.

So long, indeed, as theology, in a course of education, is forced into any warlike bearing, offensive or defensive, apologetic or polemic, even her own interests may be damaged; but when she is allowed her due place among the sciences, as alike entering with them all into the training of an accomplished scholar, and it is made the recognized vocation of both teacher and pupil to address themselves to her lessons with philosophic candor and conscientious enthusiasm, truth will at least be in the way of gaining the homage of reason, and from the first have the vantage over error.

2. It would reach a larger and more varied mass of the forming mind of society. Instead of being confined to one calling, it would include candidates for all the three learned professions, who, viewed respectively as votaries of physical, metaphysical, and theological science, are the real parties first interested in the reconciliation, and by their presence together

in the same audience might yield a wholesome stimulus and check upon both professor and student.

3. It would be preventive, rather simply remedial, as to existing social perils. However desirable it may be to equip the church with new apologetic appliances in view of modern scientific skepticism, yet these after all would not reach the evil at its hidden springs. It has its origin in the very methods, habits, and acquirements of science, and by means of these alone can be mastered and corrected.

4. It would have the high character and even the impressive appearance of an effort to follow the revolted sciences into their own haunts of estrangement and error and win them back again by their own logic and laws. It would be leading forth the young and eager thought of the time on a new mission of truth and love, rather than in the old and crooked ways of prejudice and passion. What are most of the existing treatises or even professorships put forth in the interest of theology, as viewed by her foes, but weak confessions that she is on the defensive, and base signals of defeat? It is not by polemics, apologies, or evidences, that she will ever resume her rightful dominion in the seats of learning. It is not by any sacred sophistry that she is to convince the disciples of reason, or with mere dogmatic assertion that she can reclaim the homage of philosophy. Science, like nature, can only be controlled

through a knowledge of her laws. These once found and imposed, she will prove no wayward seeker of the truth, but as her Eastern sages once read a gospel in the stars, will come by her own researches to the manifested God, and worship him with fair and costly art.

But from whichever side, or at whatever point of the academic system, the work of affiliation shall proceed, as it advances it cannot but be met with a wide and hearty welcome. He has but illly scanned the present state of learning who takes the wordy strife of mere bigots and savans as a fair reflection of the general mind upon the question. There runs through the catholic thought of the age, however seldom expressed, a deep undertone of sadness and misgiving rather than of mutual anger and defiance. True philosophy takes no delight in this sore feud, which has rent the body of her disciples in twain, but in their midst still secretly yearns for a just reconciliation. And when once any movement shall have gone forth among them that shall seem to command them with a voice of reason and love, it must sooner or later be hailed with joy, however obscure and feeble may have been its beginnings.

Thus has Providence prepared the soil, as well as disclosed the field, and sifted the seed for a mighty harvest of truth, in which we may be the sowers and the latest posterity the reapers. A great work may

at least be commenced by us: the time is at hand; the scene is ready; and the mode is obvious. In these last days and at these ends of the earth, we have the means not merely of projecting, but also of inaugurating that scheme of perfect knowledge through which the dissevered hosts of philosophy are to be thoroughly organized, and at length science matured, art perfected, society renewed, and the whole world filled with a glory of which it is not possible now to conceive.

Here let us rest in this difficult ascent of thought which we have climbed. Though the way may have seemed uncertain and tedious, yet the prospect gained is sure. That which can now only be called the ultimate philosophy may rise under another name and in other ways; but whenever, wherever, and however inaugurated, it is itself inevitable. Every species of pledge, the word of God, the law of facts, and the voice of reason, combine to proclaim it. It is that perfect system of knowledge and of society which both logically and providentially results from the whole previous development of humanity. It is the goal of history, seen with the eyes of prophecy and philosophy, and yearned after by the heart of philanthropy. It is the millennium projected upon rational sequence as well as divine decree; and could

it fail to come to pass, it would not simply be as if a great human hope had perished, but as if the divine reason had falsified its own premises, laid through all the past, and left the problem of the world unsolved. Astronomers tell us that were this material globe to reel from its orbit, it could only be by a miracle, suspending the very laws of mathematics; but how much less conceivable that the moral world should ever recoil in mid-progress and the whole work of time become a meaningless fragment! The flower of the planetary life, rooted in extinct marvels and blooming through long ages of sin and sorrow, will not thus be blighted at its budding. The fairest ideal that lives in divine and human fancy will not thus be turned to naught.

Behold then at one glance the issue to which we are come. The summary want of the age is that last philosophy into which shall have been sifted all other philosophy, which shall be at once catholic and eclectic, which shall be the joint growth and fruit of reason and faith, and which shall shed forth, through every walk of research, the blended light of discovery and revelation; a philosophy which shall be no crude aggregate of decaying systems and doctrines, but their distilled issue and living effect, and which shall not have sprung, full-born, from any one mind or people, but mature as the common work and reward of all; a philosophy which, proceeding upon the unity of truth,

shall establish the harmony of knowledge through the intelligent concurrence of the human with the divine intellect, and the rational subjection of the finite to the Infinite reason; a philosophy, too, which shall be as beneficent as it is sacred, which, in the act of healing the schisms of truth, shall also heal the sects of the school, of the church, and of the state, and while regenerating human art, both material and moral, shall at length regenerate human society; a philosophy, in a word, which shall be the providential means of subjecting the earth to man and man to God, by grouping the sciences, with their fruits and trophies, at the feet of Omniscience, and there converging and displaying all laws and causes in God, the cause of causes and law of laws, of whom are all things and in whom all things consist; to whom alone be glory.



A P P E N D I X.

Project of the Ultimate Philosophy.

PROLEGOMENA.

THE existing anarchy of the sciences consequent upon the schism between reason and revelation : its historical origin, progress, extent and evils.

The question of a logical affiliation of reason and revelation, and consequent logical organization of the mass of knowledge.

The great interests involved in the question.

Present state of opinion and parties upon the question :

1. The Extremists, both theologians and philosophers.
2. The Indifferentists, " "
3. The Impatients, " "
4. The Despondents, " "

Need and prospects of the Ultimate Philosophy : its idea, utility, rise and growth, and method. Three general works or efforts included in its project.

PART I.—SCIENCE OF THE SCIENCES.

1. EXPURGATION OF THE SCIENCES.

Misconceptions as to the origin, value, and dignity of science.
Of science as the function of the social or collective mind.
Of science as distinguished from ordinary or popular knowledge.

Of science as distinguished from art.

Of science as distinguished from philosophy.

Its essential unity amid artificial divisions.

Its steady progress through human vicissitudes and adverse influences.

Various popular, professional, and philosophical prejudices, which now hinder the unity and growth of the sciences: their source and remedy.

Various intellectual and moral qualifications for pursuing the sciences demanded by their present state.

Conditions and resources of a science of the sciences.

2. SURVEY OF THE SCIENCES.

German, French, and English classifications or systems of the sciences: their merits and defects.

Principles of the true system: 1st. That they should be arranged according to the actual order of phenomena, the terrestrial being associated with the celestial, and the material preceding the moral. 2d. That they should be divided by the modes or kinds of cognition: in each of them the inductive being distinguished from the intuitive, or the rational from the revealed; as follows:—

PHYSICAL SCIENCES.

Mechanics, or science of inorganic matter.

Chemistry, or science of organic matter.

Biology, or science of vital matter.

PSYCHICAL SCIENCES.

Psychology, or science of individual mind.

Sociology, or science of associate mind.

Theology, or science of infinite mind.

Each of the series being as to its field of cognition, both celestial and terrestrial, and as to its mode of cognition, both inductive and intuitive, though in unequal portions and degrees.

Characteristics of material as distinguished from moral science.

Characteristics of inductive as distinguished from intuitive science.

Relative advancement of the sciences.

Brief summary of their results: in the expansion of the intellect, in the accumulation of truth, and in new accessions of human power, dignity, and happiness.

Their need and readiness for some logical organization and more systematic culture.

3. THEORY OF THE SCIENCES, OR DOCTRINE OF COGNITION.

(1) Of the cognitive, or the means of cognition.

False theories, which would reject either reason or revelation, or would derange their normal relations.

The true theory, that of their gradual coincidence and ultimate harmony.

Foundation for this theory in both the nature and the history of the human intellect.

Its accuracy and fitness.

(2) Of the cognizable, or the material of cognition.

False theories, which would ignore celestial or spiritual phenomena as inaccessible or imaginary.

The true theory, that which would be cognizant of both in their actual coexistences and successions, and claim as the ideal domain of science the whole aggregate of worlds throughout all ages.

Foundation for this theory in both the structure and the development of the universe.

Its completeness and grandeur.

(3) Of the cognitive in action upon the cognizable, or the process of cognition.

False theories, which would either confine reason to terrestrial and material phenomena, or confine revelation to spiritual and celestial phenomena.

The true theory, that which would combine both modes of cognition in all fields of cognition as involving a joint process of

finite and infinite intelligence throughout immensity and eternity, toward the goal of omniscience.

Foundation for this theory in the relations of finite and Infinite mind, and in the history of the human sciences.

Procession of the sciences in correspondence with the procession of phenomena, as involving an endless review of the creation, by the creature, for the glory of the Creator.

Ideal perfectibility of knowledge as contrasted with its actual imperfection.

Means and motives for ever striving after perfect knowledge.

PART II.—ART OF THE SCIENCES.

Need of precepts for pursuing and perfecting the sciences.

Preliminary work of a logical partition of the sciences, with a view to their systematic culture.

1. AXIOMS OF NOMOLOGY, or organon of inductive science.
2. AXIOMS OF AETIOLOGY, or “ of intuitive “
3. AXIOMS OF ONTOLOGY, or “ of omniscience.

The ideal of a full equipment of the sciences for their work of endless progression toward perfect knowledge.

Prospect of its realization.

PART III.—SCIENCE OF THE ARTS.

Practical issue of the sciences in their correspondent arts.

This growth of the arts out of the sciences, from having been spontaneous and irregular, may become more and more logical and systematic.

Logical partition of the arts to be adjusted to that of the sciences.

1. SCIENCE OF THE MATERIAL ARTS, or principles which regulate the rational control of man over mechanical and chemical phenomena in both the terrestrial and celestial spheres of action.

2. SCIENCE OF THE MORAL ARTS, or principles which regulate

the rational control of man over individual and social phenomena in both the terrestrial and celestial spheres of action.

3. SCIENCE OF THE RELIGIOUS ARTS, or principles which regulate the rational control of man, in co-operation with God, over both material and spiritual phenomena.

Procession of the arts from and with the sciences as involving the progressive dominion of the creature over the creation, and his participation in the glory of the Creator.

Ideal perfectibility of the arts as contrasted with their actual imperfection.

Consummation of the ultimate philosophy in three grand issues of human history :

- (1) The ultimate system of sciences.
- (2) The ultimate system of arts.
- (3) The ultimate system of society.

Means and motives for ever striving after this great consummation.

Inauguration of the ultimate philosophy :

- The time, the present age.
- The scene, the Western Hemisphere.
- The mode, the academic curriculum.

Scheme of academic study for its inauguration, based upon the foregoing project, and arranged with reference to the existing and prospective state of the sciences, as follows:—

I. RATIONAL AND REVEALED ASTRONOMY.

Illustration by celestial mechanics of the Divine omnipotence, omnipresence, eternity, and immutability.

Antagonistic theories of cumulative forces and of successive creations in their bearing upon the Scripture doctrine of the origin and destiny of the material universe.

Astronomical miracles of Divine art.

Astronomical marvels of human art.

The millennium of mechanics, or of the mechanical arts, both celestial and terrestrial.

II. RATIONAL AND REVEALED GEOLOGY.

Illustration by terrestrial chemistry of the Divine wisdom and goodness.

Antagonistic theories of the Catastrophists and Uniformitarians in their bearing upon the Scripture doctrine of the genesis and renovation of the earth.

Cosmical miracles of Divine art.

Cosmical marvels of human art.

The millennium of chemistry, or of the cosmical arts, both terrestrial and celestial.

III. RATIONAL AND REVEALED ANTHROPOLOGY.

Cumulative illustration by terrestrial biology of the physical attributes of the Creator. The recapitulation of the whole planetary organism in man as the flower and head of nature.

Antagonistic theories of the Monogenists and Polygenists in their bearing upon the Scripture doctrine of the First and Second Adam.

Corporeal miracles of Divine art.

Corporeal marvels of human art.

The millennium of biology, or of the physical arts, both terrestrial and celestial.

IV. RATIONAL AND REVEALED PSYCHOLOGY.

Illustration by terrestrial psychology of the Divine justice and mercy.

Antagonistic theories of the Libertarians and Necessarians in their bearing upon the Scripture doctrine of the depravity and regeneration of the soul.

Antagonistic theories of the Spiritualists and Materialists in

their bearing upon the Scripture doctrine of the present and future relations of soul and body.

Antagonistic theories of the Naturalists and Supernaturalists in their bearing upon the Scripture doctrine of satanic and angelic influence.

Psychical miracles of Divine art.

Psychical marvels of human art.

The millennium of psychology, or of the psychical arts, both terrestrial and celestial.

V. RATIONAL AND REVEALED SOCIOLOGY.

Cumulative illustration by terrestrial sociology of the moral attributes of Providence.

Antagonistic theories of Divine economies and human progress in their bearing upon the Scripture doctrine of the apostacy and the millennium.

Antagonistic theories as to the relation of the temporal to the eternal, or of the spiritual to the material, in their bearing upon the Scripture doctrine of church and state.

Antagonistic theories as to the inhabitation of the planets in their bearing upon the Scripture doctrine of the kingdom of the heavens, and the commerce of earthly and heavenly races.

Millennium of sociology, or of the political arts, both terrestrial and celestial.

VI. RATIONAL AND REVEALED THEOLOGY.

Climacteric illustration by terrestrial theology of all Divine perfections. The recapitulation of the whole material and spiritual organism in the Second Adam, the Son of God and the Son of man.

Antagonistic theories as to the Infinite or the Absolute in their bearing upon the Scripture doctrine of the Being of God.

Antagonistic theories of the Monotheists and Pantheists in

their bearing upon the Scripture doctrine of creation and redemption.

Antagonistic theories as to the relation of the finite to the Infinite Spirit in their bearing upon the Scripture doctrine of the destiny of the creature.

The millennium of theology, or of the religious arts, both terrestrial and celestial.

The general millennium of terrestrial sciences and arts, both material and spiritual, as involving a union of the human with the Divine mind and will in the knowledge and control of all terrestrial phenomena.

The universal millennium of celestial sciences and arts, both spiritual and material, as involving the endless return, through all worlds and ages, of the finite into the Infinite Reason and effort after the one perfect religion or *religature* of the creature to the Creator, through and by means of the creation.

Aims of such a course of studies: 1st. To preserve throughout the scale of the sciences the vital connection of the terrestrial with the celestial material of cognition, and the logical distinction between the empirical and intuitional modes of cognition. 2d. To combine in each science all that is established as discovered with all that is established as revealed, and as to all that is still theoretical and doctrinal, to show the problem of opinion. 3d. To connect logically the ascertained portions of one science with those of another, and problematically their theoretical portions. 4th. To display with the series of the sciences their corresponding series of arts as ever tending to enhance the Divine glory and human welfare. And lastly, to organize, by this means, that proximate system of sciences, arts, and societies upon which to project, in endless perspective, the ultimate system.



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